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*15 Reg. Dr. Record
5/30/03*

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**UNITED STATES
PATENT AND
TRADEMARK OFFICE**

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APR-18-2003 17:28 TAROLLI SUNDHEIM COVELL 2166214072 F.02/12

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FACSIMILE COVER SHEET

To: MS LEO S. LUM
Fax No.: (703) 872-9325
From: BARRY L. TUMMINO
RE: U.S. McCURDY PATENT APPL. SERIAL
NO. 09494,054, FILED FEBRUARY 1, 2000 FOR METHOD AND
APPARATUS FOR CONTROLLING AN ADJUSTABLE OCCUPANT
PROTECTION DEVICE USING AN ULTRASONIC SENSOR, ATTY.
DOCKET NO. TRW(TM)170
Date: March 18, 2003

Please find attached an Amendment or Response After Final Rejection
Transmitted (4 pgs.); and a Request for Reconsideration (7 pgs.)

TO: 703-308-2571

Examiner Lum,
As per our conversation, here is a
Retransmission of my earlier Fax
B. Tummino

NUMBER OF PAGES FOLLOWING THIS COVER SHEET 11

NOTICE
This is a private facsimile transmission and contains confidential and/or privileged information
intended solely for the individual or entity to which it is addressed. The disclosure, distribution
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GROUP 3800

*Record
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14 pages

Retransmission of Fax
B. Tummino
Reg No 29,709
4/21/03

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-TAROLLI SUNDHEIM COVELL -

***** -TAROLLI SUNDHEIM- ***** 2166214072- *****

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FACSIMILE COVER SHEET

To: MS LEE S. LUM

Fax No.: (703) 872-9928 (703) 872-9325

From: BARRY L. TUMMINO

RE: U.S. McCURDY PATENT APPLN. SERIAL
NO. 09/494,954, FILED FEBRUARY 1, 2000 FOR METHOD AND
APPARATUS FOR CONTROLLING AN ACTUATABLE OCCUPANT
PROTECTION DEVICE USING AN ULTRASONIC SENSOR, ATTY.
DOCKET NO. TRW(TE)4170

Date: March 18, 2003

Please find attached an Amendment or Response After Final Rejection
Transmittal (4 pgs.); and a Request for Reconsideration (7 pgs.)

NUMBER OF PAGES FOLLOWING THIS COVER SHEET 11**NOTICE**

This is a private facsimile transmission and contains confidential and/or privileged information intended solely for the individual or entity to which it is addressed. The disclosure, distribution or use of this information by other than the intended recipient is prohibited.

Practitioner's Docket No. TRW(TE)4170

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Roger A. McCurdy

Application No.: 09/494,954

Group No.: 3611

Filed: February 1, 2000

Examiner: Lee S. Lum

For: METHOD AND APPARATUS FOR CONTROLLING AN ACTUATABLE
OCCUPANT PROTECTION DEVICE USING AN ULTRASONIC SENSOROK
PLS ENTER
4/23/03

**RESPONSE UNDER
37 C.F.R. § 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP**

BOX AF
Assistant Commissioner for Patents
Washington, D.C. 20231

NOTE: To take advantage of the expedited procedure the envelope in which this paper is mailed must be addressed as shown and must also be marked "Box AF" in the lower left hand corner. Alternatively, this paper can be hand carried to the particular Examining Group or other area of the Office in which the application is pending, in which case any envelope in which this paper is placed must be marked as in the bold type box above. Notice of Sept. 20, 1985 (1059 O.G. 19-20). See M.P.E.P. § 714.13, 6th ed., rev. 3.

AMENDMENT OR RESPONSE AFTER FINAL REJECTION-TRANSMITTAL

1. Transmitted herewith is an amendment after final rejection (37 C.F.R. § 1.116) for this application.

CERTIFICATE OF MAILING/TRANSMISSION 37 CFR 1.8(a) and 1.10*
(When using Express Mail, the Express Mail label number is mandatory;
Express Mail Certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

- ☐ deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.
37 C.F.R. § 1.8(a)
- ☐ with sufficient postage as first class mail.
- ☐ as "Express Mail Post Office to Addressee" Mailing Label No. _____ (mandatory)

TRANSMISSION

- ☒ transmitted by facsimile to the Patent and Trademark Office.

Signature

Anita J. Galo

(type or print name of person certifying)

Date: March 18, 2003

***WARNING:** Each paper or fee filed by Express Mail must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

NOTE: *Response to Final Rejection—Avoiding Extension Fees* "In patent applications wherein a three month Shortened Statutory Period (SSP) is set for response to a Final Rejection, the response would best be filed within two months of the date of the Office Action. If filed within two months, any Advisory Action mailed after the SSP expires will reset the SSP to expire on the date of the Advisory Action for extension fee purposes, but never more than six months from the date of the Final Rejection." Notice of Nov. 30, 1990 (1122 O.G. 571 to 591). See M.P.E.P. § 714.13, 6th ed., rev. 3.

STATUS

2. Applicant is
- ☐ a small entity. A statement:
- ☐ is attached.
- ☐ was already filed.
- ☒ other than a small entity.

EXTENSION OF TERM

NOTE: *As to a Supplemental Amendment filed in response to a final office action, the Notice of December 10, 1985 (1061 O.G. 34-35) states:*

"If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run."

3. *(complete (a) or (b), as applicable)*
- (a) ☐ Applicant petitions for an extension of time under 37 C.F.R. § 1.136 (fees: 37 C.F.R. § 1.17(1)-(4) for the total number of months check below:

Extension (months)	Fee for other than small entity	Fee for small entity
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 400.00	\$200.00
<input type="checkbox"/> three months	\$ 920.00	\$460.00
<input type="checkbox"/> four months	1,440.00	\$720.00

Fee \$ _____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next time, if applicable)

- ☐ An extension for _____ months has already been secured and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ _____

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE F R CLAIMS

4. The fee for claims (37 C.F.R. § 1.16(b)-d)) has been calculated as shown below:

(Col. 1)		(Col. 2)	(Col. 3)	SMALL ENTITY		OTHER THAN A SMALL ENTITY	
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE	OR	ADDIT. FEE
TOTAL *22		MINUS ** 22	=0	X\$ 9=	\$		X\$ 18= \$0.00
INDEP. * 5		MINUS *** 5	=0	X\$ 42=	\$		X\$ 84= \$0.00
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM			=0	X\$140=	\$		X\$280= \$0.00
				TOTAL		OR	TOTAL
				ADDIT. FEE	\$		ADDIT. FEE \$0.00

- * If the entry in Col. 1 is less than entry in Col. 2, write "0" in Col. 3.
 ** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest No. Previously Paid For" (Total or Indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

WARNING See 37 C.F.R. § 1.116.

(complete (c) or (d), as applicable)

- (c) ☒ No additional fee for claims is required.

OR

- (d) ☐ Total additional fee for claims required \$ _____

FEE PAYMENT

5. ☐ Attached is a ☐ check ☐ money order in the amount of \$ _____
☒ Authorization is hereby made to charge the amount of \$0.00
☒ to Deposit Account No. 20-0090.
☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

WARNING: Credit card information should not be included on this form as it may become public.

- ☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached..

FEE DEFICIENCY

NOTE: *If there is a fee deficiency and there is no authorization to charge an account, additional fees are Necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986 (1065 O.G. 31-33).*

6. ☒ If any additional extension and/or fee is required, charge Account No. 20-0090.

AND/OR

- ☒ If any additional fee for claims is required, charge Account No. 20-0090.

Barry L. Tummino
SIGNATURE OF ATTORNEY

Barry L. Tummino
(type or print name of attorney)

Reg. No.: 29,709

Tel. No.: (216) 621-2234

Customer No.:

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P.O. Address
26,294

PATENT

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS
BEING FACSIMILE TRANSMITTED TO: ASSISTANT
COMMISSIONER FOR PATENTS, WASHINGTON, D.C.
20231, ON

March 18, 2003
Amato J. Malo 03/18/03
SIGNATURE DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Roger A McCurdy
Serial No. : 09/494,954
Filing Date : February 1, 2000
For : METHOD AND APPARATUS FOR
CONTROLLING AN ACTUATABLE
OCCUPANT PROTECTION DEVICE
USING AN ULTRASONIC SENSOR
Group Art Unit : 3611
Examiner : Lee S. Lum
Attorney Docket No. : TRW(TE)4170

Assistant Commissioner for Patents
Washington, D.C. 20231

REQUEST FOR RECONSIDERATION AFTER FINAL

Sir:

In response to the Office Action dated December 23, 2002,
reconsideration of the above-identified patent application in
view of the following remarks is respectfully requested.

A. **SUMMARY OF INTERVIEW OF DECEMBER 12, 2002**

The Office Action of December 23, 2002 included an
interview summary of a December 12, 2002 interview between
Examiner Lum and the undersigned. The Examiner's Interview
Summary correctly states that the prior art discussed included
Ross and Thompson. However, it is respectfully submitted that
no discussion took place concerning the use of Thompson as
prior art per se. During the interview, Examiner Lum and the
undersigned discussed that the rejection of claims under 35

Serial No. 09/494,954

U.S.C. §103 over a combination of Thompson and Ross was improper because Ross and the present invention were commonly owned, i.e., Ross is not available as a reference under §103.

B. FINALITY OF THE OFFICE ACTION IS PREMATURE

In the current Office Action, claims 1-4, 10, 14, 17, and 22 were finally rejected as being anticipated by Ross under 35 U.S.C. 102(e). In the prior Office Action dated May 17, 2002, claims 1-4, 10, 14, 17, and 22 were rejected as being anticipated by Ross under 35 U.S.C. 102(b). In making the current rejection final, the Office Action states, "Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action." It is respectfully submitted that this is incorrect and the finality of the rejection is improper.

The rejection of the claims under 35 U.S.C. §102(b) had to be withdrawn, not because of Applicant's amendment, but because the rejection was improper, i.e., Ross is not a reference under §102(b). Thus, the improper rejection (the §102(b) rejection) of the claims necessitated the new ground of rejection. Since the rejection under 35 U.S.C. §102(b) was improper, amendment of the claims for the furtherance of prosecution did not necessitate the new grounds for rejection. Prior to any amendment of the claims, new grounds for any subsequent rejection was required due to the improper rejection of the claims under §102(b). Therefore, it is respectfully requested that the finality of the current Office Action be withdrawn thus permitting applicant an opportunity to respond to the new rejection.

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C. ROSS FAILS TO ANTICIPATE CLAIMS 1-4, 10, 14, 17 AND 22

Anticipation requires a single prior art reference that discloses each element of the claim. W.L. Gore & Associates v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983) cert. denied 469 U.S. 851 (1984). For a reference to anticipate a claim, "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." Scripps Clinic & Research Foundation v. Genentech Inc., 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). It is respectfully suggested that Ross fails to teach or suggest each feature of claim 1-4, 10, 14, 17, and 22.

Ross teaches a passenger restraint system 10 for a vehicle that includes a low frequency accelerometer circuit 12 and a series of high frequency pressure transducers 16 (Ross, Col. 3, line 60 to Col. 4, line 6). The high frequency pressure transducers 16 sense high frequency signals that are generated as a result of metal being deformed during a crash event (Ross, Col. 4, lines 2-6). The high frequency pressure transducers 16 provide an indication of crash severity (Ross, Col. 4, lines 1-26, and Col. 4, lines 49-59). It is further stated that the high frequency pressure transducers cannot provide adequate directional information of the crash event (Ross, Col. 2, lines 30-35).

The low frequency accelerometer circuit 12 of Ross provides directional information about the crash event (Ross, Col. 4, lines 59-62). According to the specification, the low frequency accelerometer circuit 12 provides directional

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information about the crash event more quickly than providing a reliable indication of crash intensity (Ross, Col. 4, line 66-Col. 5, line 3). Thus, Ross teaches a microprocessor 22 that determines whether to deploy an air bag in response to crash intensity information from the high frequency pressure transducers 16 and directional information from the low frequency accelerometer circuit 12 (Ross, Col. 4, line 66 to Col. 5, line 6). As a result of using the high frequency pressure transducers 16 for intensity and the low frequency accelerometer circuit 12 for direction, the microprocessor 22, according to Ross, makes a deployment determination quicker than if the accelerometer circuit 12, alone, was used for both direction and intensity in a deployment determination (Ross, Col. 5, lines 3-6). In effect, Ross makes a single deployment determination based on input data from two sensors. It does not make two separate deployment determinations.

Each of claims 1, 10, 14, 17, and 22 in the present application includes an acoustic safing sensor. Each of claims 1-4, 10, 14, 17 and 22 also includes a controller for controlling actuation of an occupant protection device in response to signals from both the crash sensor and the safing sensor separately indicating the occurrence of a deployment crash event. In effect, the presently claimed invention makes two separate determinations of a deployment crash event and then, controls deployment when both indicate a deployment crash event. Ross fails to teach or suggest these features recited in the claimed invention.

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The term "safing sensor" is a term of art. A safing sensor operates separately and independently from the vehicle discrimination crash sensor. The safing sensor output is used to determine whether a deployment condition has occurred. The determination using the safing sensor signal is input to an ANDing function. A determination using the discrimination crash sensor signal is also input to the ANDing function. The vehicle occupant protection device is only deployed if both the vehicle crash sensor and the safing sensor, separately and independently, indicate a deployment condition has occurred. Thus, deployment of the vehicle occupant protection device only occurs when the ANDing function receives both determinations of a deployment condition from both the vehicle crash sensor and the acoustic safing sensor.

Thus, it is respectfully submitted that Ross fails to teach or suggest an acoustic safing sensor. Therefore, it is respectfully suggested that the rejection of claims 1-4, 10, 14, 17, and 22 is improper and should be withdrawn.

Moreover, it is respectfully suggested that Ross fails to teach or suggest a controller as defined in claims 1-4, 10, 14, 17, and 22. The claimed controller is responsive to the signal from the crash sensor to determine whether a deployment crash event has occurred. The controller is separately responsive to the signal from the safing sensor to determine whether a deployment crash event has occurred. The controller controls actuation of the occupant protection device in response to both determinations.

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Ross specifically teaches combining signal portions from a low frequency accelerometer circuit 12 (i.e., direction of crash) and from a high frequency pressure transducer 16 (i.e., intensity of crash) to make a single determination of a deployment crash event. Thus, the microprocessor 22 of Ross does not control actuation of the occupant protection device in response to both a crash signal and a safing signal separately indicating the occurrence of a crash event. Ross uses two signals for a single determination of the occurrence of a crash event. Signal portions from the low frequency accelerometer circuit 12 and from high frequency pressure transducers 16 are used in the single determination. Thus, it is respectfully suggested that Ross fails to teach or suggest the controller of claims 1-4, 10, 14, 17 and 22. Therefore, for this further reason, it is respectfully suggested that the rejection of claims 1-4, 10, 14, 17 and 22 is improper and should be withdrawn.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Serial No. 09/494,954

Please charge any deficiency or credit any overpayment in
the fees for this amendment to our Deposit Account
No. 20-0090.

Respectfully submitted,



Barry L. Tummino
Reg. No. 29,709
Customer No.: 26,294

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& TUMMINO L.L.P.
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